

**UNITED STATES DISTRICT COURT
DISTRICT OF MASSACHUSETTS**

BIO-RAD LABORATORIES, INC. and
PRESIDENT AND FELLOWS OF HARVARD
COLLEGE

Plaintiffs,

v.

10X GENOMICS, INC.,

Defendant.

Civil Action No. ____.

DEMAND FOR JURY TRIAL

COMPLAINT

Bio-Rad Laboratories, Inc. (“Bio-Rad”) and the President and Fellows of Harvard College (“Harvard University”) (collectively “Plaintiffs”) hereby allege for their Complaint (“Complaint”) against Defendant 10X Genomics, Inc. (“10X”), on personal knowledge as to their own actions and on information and belief as to the actions of others, as follows:

NATURE OF THE ACTION

1. This is an action for patent infringement arising under the United States Patent Act 35 U.S.C. §§1 *et seq.*, including 35 U.S.C. § 271.
2. Plaintiffs bring this action to halt 10X’s infringement of their rights under the Patent Laws of the United States 35 U.S.C. §1, *et. seq.*, which arise under U.S. Patent No. 8,871,444 (“the ’444 patent”), which is attached hereto as Exhibit 1, U.S. Patent No. 9,919,277 (“the ’277 patent”), which is attached hereto as Exhibit 14.
3. Bio-Rad by itself brings this action to halt 10X’s infringement of its rights under the Patent Laws of the United States 35 U.S.C. §1, *et. seq.*, and U.S. Patent No. 10,190,115 (“the ’115 patent”), which is attached hereto as Exhibit 15.

THE PARTIES

4. Plaintiff Bio-Rad is a Delaware corporation having a principal place of business at 1000 Alfred Nobel Drive, Hercules, CA 94547. Bio-Rad is the licensee to the '444 and '277 patents, and the patent owner for the '115 patent.

5. Harvard University is a research university incorporated as a Massachusetts not-for-profit institution, with its principal place of business at 1563 Massachusetts Ave., Cambridge, Massachusetts 02138. Harvard University is a patent owner and licensor for the '444 and '277 patents.

6. 10X is a company organized and existing under the laws of Delaware, with its principal place of business at 7068 Koll Center Parkway, Suite 401, Pleasanton, CA, 94566.

JURISDICTION AND VENUE

7. This action for patent infringement arises under the patent laws of the United States, Title 35 of the United States Code.

8. This Court has subject matter jurisdiction pursuant to 28 U.S.C. §§ 1331 and 1338(a).

9. This Court has personal jurisdiction over defendant 10X because 10X has substantial contacts with the forum as a consequence of conducting business in Massachusetts, and has purposefully availed itself of the benefits and protections of Massachusetts state law. For example, 10X has sold the accused Next GEM Platform to customers in Massachusetts, including to Plaintiff Harvard, Boston University, and the University of Massachusetts at Boston. *See* Exs. 18 and 19.

10. This Court also has personal jurisdiction over defendant 10X because it has voluntarily entered into Massachusetts for the purpose of availing itself of Massachusetts

consumers and the Massachusetts market to advertise, market, and/or promote the accused infringing Next GEM Platform, including by appearing and promoting the Next GEM Platform at the Longwood Medical and Academic Area in Boston, Massachusetts on September 3, 2019. *See generally* Ex. 20.

11. Additionally, this Court has personal jurisdiction over 10X because 10X 10X has consented to this Court's jurisdiction. In a prior litigation between the parties in the District of Delaware, C.A. No. 1:19-cv-01699-RGA ("Delaware Litigation"), 10X contended that it had an implied license to the '444 and '277 patents by way of a written license agreement between Harvard and 10X ("Harvard-10X License Agreement"). The Harvard-10X License Agreement included a forum selection clause in which 10X agreed that:

"Any action, suit or other proceeding arising under or relating to this Agreement (a 'Suit') shall be brought in a court of competent jurisdiction in the Commonwealth of Massachusetts, and the parties hereby consent to the sole jurisdiction of the state and federal courts sitting in the Commonwealth of Massachusetts. Each party agrees not to raise any objection at any time to the laying or maintaining of the venue of any Suit in any of the specified courts, irrevocably waives any claim that Suit has been brought in any inconvenient forum and further irrevocably waives the right to object, with respect to any Suit, that such court does not have any jurisdiction over such party."

10X further contended in the Delaware Litigation that this forum selection clause applied to Plaintiffs' causes of action for infringement of the '444 and '277 patents. While Plaintiffs deny that the Harvard-10X License Agreement provides 10X with an implied license to the '444 and '277 patents, the parties' dispute regarding the scope of the Harvard-10X License Agreement is a dispute "arising under or relating to" the Harvard-10X License Agreement, and therefore the forum selection clause provides 10X's consent to this Court's jurisdiction. Having represented to the United States District Court for the District of Delaware during the Delaware Litigation that the

forum selection clause applies, 10X is also now judicially estopped from contesting the applicability of the clause.

12. Venue is proper in this District under 28 U.S.C. §§ 1391(b) and (c), and 1400(b) as to Plaintiffs' causes of action for infringement of the '444 and '277 patents because 10X consented to venue in this District by agreeing "not to raise any objection at any time to the laying or maintaining of the venue of any Suit" "arising under or related to" the Harvard-10X License Agreement in this District. While Plaintiffs deny that the Harvard-10X License Agreement provides 10X with an implied license to the '444 and '277 patents, the parties' dispute regarding the scope of the Harvard-10X License Agreement is a dispute "arising under or relating to" the Harvard-10X License Agreement, and therefore the forum selection clause provides 10X's consent to venue in this District. Having represented to the United States District Court for the District of Delaware during the Delaware Litigation that the forum selection clause applies, 10X is also now judicially estopped from contesting the applicability of the clause.

13. Venue is proper in this District under 28 U.S.C. §§ 1391(b) and (c), and 1400(b) as to Bio-Rad's cause of action for infringement of the '115 patent because that cause of action involves the same accused products, same underlying technology, and the same witnesses and sources of proof as Plaintiffs' causes of action for infringement of the '444 and '277 patents, such that the causes of action arise from a common nucleus of operative fact and this Court may exercise pendent venue over Bio-Rad's claim of infringement of the '115 patent. In particular, 10X's Next GEM Platform is the product accused of infringing each of the '444, '277, and '115 patents. The technology underlying the Next GEM Platform and each of the asserted patents is the use of droplet-based emulsions for next generation sequencing and single-cell analysis. Because all three causes of action require assessment of how the Next GEM Platform generates

and utilizes droplet-based emulsions to prepare samples for next generation sequencing and single-cell analysis, the witnesses and documentary evidence relevant to each cause of action are expected to be the same.

BACKGROUND

14. Bio-Rad is a leader in the field of life science research and clinical diagnostics, and today many of Bio-Rad's products and tools used in the biotechnology industry are recognized as the gold standard.

15. A centerpiece of many of Bio-Rad's products is its Droplet Digital™ technology. This technology involves partitioning biological samples by placing them in individual microdroplets that are formed based on emulsion chemistry. Using this technology, researchers can create a large numbers of partitions, each one for carrying out a reaction, with a minimum amount of sample handling and a minimum amount of sample volume. A variety of different reactions may be carried out inside the droplets, including polymerase chain reaction ("PCR"), and various reactions to prepare samples for next generation sequencing ("NGS").

16. Bio-Rad began offering its Droplet Digital™ PCR ("ddPCR™") Systems brands in 2011 following its \$162 million acquisition of QuantaLife, Inc. ("QuantaLife") and its digital droplet PCR technology. The work at QuantaLife, and subsequently at Bio-Rad, led to a large number of patents being granted throughout the world concerning droplet-based emulsion systems and methods.

17. Bio-Rad's droplet digital technology was a breakthrough that greatly advanced the capabilities of PCR and NGS. Just one year after the launch of Bio-Rad's first generation product, the number of papers citing Bio-Rad's droplet digital method using PCR

nearly quintupled. Indeed, more than 250 peer-reviewed papers have been published in the fields of cancer, liquid biopsy, virology, and other diseases that cited to BioRad's technology.

18. Bio-Rad's ddSEQ™ Single-Cell Isolator uses Droplet Digital™ technology to encapsulate single cells and barcodes into subnanoliter droplets, where cell lysis and barcoding of cellular messenger RNA occur. Libraries are generated representing the messenger RNAs from single cells that can be sequenced for Single Cell Analysis.

19. Bio-Rad has spent years and hundreds of millions of dollars researching, acquiring and developing its Droplet technology and portfolio that is the foundation for many droplet-based applications such as ddPCR™ and NGS and Single Cell Analysis.

20. For instance, in addition to its \$162 million acquisition of QuantaLife, Bio-Rad completed an \$87 million acquisition of RainDance Technologies, Inc. ("RainDance"), and all of its intellectual property.

21. As another example, Bio-Rad is the exclusive licensee of droplet intellectual property from world-renowned institutions, such as Harvard University and Lawrence Livermore National Laboratory. Likewise, by virtue of its acquisition of RainDance, Bio-Rad acquired an exclusive licensee to foundational droplet technology developed at the University of Chicago.

22. Starting in 2012, several Bio-Rad employees, including Serge Saxanoff (the sole inventor of the '115 patent) left to found 10X Technologies, Inc., which later became Defendant 10X. This company, like Bio-Rad, focused on developing systems and methods for generating droplet-based emulsions.

23. In 2015, 10X launched a droplet-based emulsion system called GemCode that used the claimed microchips and chemistry for forming droplets that can be used in, among

other things, Next Generation Sequencing and Single Cell Analysis. Approximately one year later, 10X launched an updated version of its droplet-based emulsion system called Chromium. These platforms compete against Bio-Rad's Droplet Digital™ technology.

24. In February 2015, RainDance filed a lawsuit in the District of Delaware accusing 10X's GemCode and Chromium platforms of infringing several patents developed at the University of Chicago. Following its acquisition of RainDance, Bio-Rad substituted itself as the lead Plaintiff in this litigation. In November 2018, Bio-Rad obtained a jury verdict of willful infringement against 10X Genomics, and in August 2019 Bio-Rad obtained a permanent injunction.

25. Following the jury verdict, 10X announced a new line of products, which it recently began selling under the tradename "Next GEM." The Next GEM platform consists of an instrument known as the Chromium Controller along with reagent kits for carrying out various genetic analyses, including at least 10X's Chromium Single Cell Gene Expression Solution, Chromium Single Cell Immune Profiling Solution, and Chromium Single Cell ATAC Solution. *See generally* Exs. 2-3.

26. The Next GEM platform is at the heart of a \$362 million IPO that 10X launched on September 12, 2019. As 10X stated in its prospectus, "[w]e currently expect that, by the end of the third quarter of 2019, all Chromium instruments that we sell will operate exclusively with our Next GEM solutions and that our Chromium products utilizing our Next GEM microfluidic chips will constitute substantially all of our Chromium sales by the end of 2020." Ex. 4 at 7.

27. 10X, however, infringes, literally or under the doctrine of equivalents, at least the '444, '277, and '115 patents through its activities connected to the Next GEM platform.

COUNT I

(Infringement of U.S. Patent No. 8,871,444)

28. Plaintiffs re-allege and incorporate by reference the allegations contained in paragraphs 1 through 27 above as relevant to this count.

29. On October 28, 2014, the United States Patent and Trademark Office duly and legally issued the '444 patent, entitled "In vitro evolution in microfluidic systems." A copy of the '444 patent is attached as Exhibit 1.

30. Andrew David Griffiths, David A. Weitz, Darren R. Link, Keunho Link, and Jerome Bibette are the sole and true inventors of the '444 patent. By operation of law and as a result of written assignment agreements, United Kingdom Research and Innovation ("UKRI") and President and Fellows of Harvard College ("Harvard University") obtained the entire right, title and interest to and in the '444 patent.

31. Pursuant to license agreements Bio-Rad entered into with UKRI and Harvard University, Bio-Rad obtained an exclusive license to the '444 patent in the field of microfluidic systems, kits and chips.

32. On information and belief, 10X has infringed and continues to infringe at least claims 1-2, 4, and 8 of the '444 patent pursuant to 35 U.S.C. § 271(a), literally or under the doctrine of equivalents, by using within the United States without authority the Next GEM products. As an example, attached as Exhibit 5 is a preliminary and exemplary claim chart detailing 10X's infringement of multiple claims of the '444 patent. This chart is not intended to limit Plaintiff's right to modify this chart or any other claim chart or allege that other activities of 10X infringe the identified claims or any other claims of the '444 patent or any other patents. Exhibit 5 is hereby incorporated by reference in its entirety. Each claim element in Exhibit 5 that

is mapped to 10X's Next GEM platform shall be considered an allegation within the meaning of the Federal Rules of Civil Procedure and therefore a response to each allegation is required.

33. 10X's infringement of the '444 patent has been knowing and willful. 10X's founders, senior-most executives, and senior scientists became aware of Bio-Rad's license with Harvard University at least in connection with 10X's November 2018 trial against Bio-Rad in the District of Delaware, where 10X was found to willfully infringe intellectual property from the University of Chicago. Moreover, 10X has become deeply familiar with the full scope of the Harvard University droplet patent portfolio (including the '444 patent), at least because it has licensed certain patents from Harvard University, as confirmed by Dr. Ben Hindson, 10X's co-founder and Chief Scientific Officer, during 10X's November 2018 trial. In fact, Dr. Hindson confirmed that 10X was well aware of the work of at least one named inventor of the '444 patent, including Dr. Weitz.

34. Consistent with the foregoing, going back to at least April 4, 2014, 10X has filed Information Disclosure Statements with the United States Patent Office in which it has cited U.S. Patent Application No. 2006/0078888, which is a published version of the priority application that the '444 patent is a continuation of. *See* Exs. 10-13.

35. On information and belief, in view of 10X's (1) knowledge of Bio-Rad's license with Harvard University, (2) knowledge of the Harvard University droplet patents, and (3) prior willful infringement of intellectual property controlled by Bio-Rad, 10X has carefully monitored and analyzed the Harvard University droplet patent portfolio and, through that work, become aware of the '444 patent and the fact that the Next GEM platform infringes the '444 patent. Despite being aware of these facts, 10Xs has nonetheless launched its Next GEM platform, even making it the centerpiece of a \$362 million IPO. As 10X stated in its prospectus in support of

its IPO, “[w]e currently expect that, by the end of the third quarter of 2019, all Chromium instruments that we sell will operate exclusively with our Next GEM solutions and that our Chromium products utilizing our Next GEM microfluidic chips will constitute substantially all of our Chromium sales by the end of 2020.” Ex. 4 at 7.

36. In addition, 10X has had knowledge of and notice of the ’444 patent and its infringement since at least, and through, the filing and service of this Complaint and despite this knowledge continues to commit the aforementioned infringing acts. For at least the reasons stated in this paragraph and in paragraphs 33-35 above, this infringement has been willful.

37. 10X actively, knowingly, and intentionally has induced, or has threatened to induce, infringement of at least claims 1-2, 4, and 8 of the ’444 patent through a range of activities. First, on information and belief, 10X has induced infringement by controlling the design and manufacture of, offering for sale, and selling the Next GEM platform and/or its individual components with the knowledge and specific intent that its customers will use the Next GEM platform to infringe the ’444 patent, literally or under the doctrine of equivalents, by performing the claimed method for detecting a product of an enzymatic reaction.

38. Second, on information and belief, 10X has induced infringement by its customers through the dissemination of promotional and marketing materials relating to the Next GEM platform with the knowledge and specific intent that its customers will use the Next GEM platform to infringe the ’444 patent, literally or under the doctrine of equivalents, by performing the claimed method for detecting a product of an enzymatic reaction. For instance, 10X promotes the Next GEM platform on its website. As 10X states on the Technology portion of its website, its “proprietary Next GEM technology fuels our Chromium System with an innovative reagent

delivery system, set of algorithms and turnkey software analysis tools that enable the discovery of previously inaccessible genetic information at massive rate and scale.” Ex. 3 at 1.

39. Third, on information and belief, 10X has induced infringement by its customers through the creation of distribution channels for the Next GEM platform and/or its individual components in the United States with the knowledge and specific intent that its customers will use the Next GEM platform to infringe the ’444 patent, literally or under the doctrine of equivalents, by performing the claimed method for detecting a product of an enzymatic reaction.

40. Fourth, on information and belief, 10X has induced infringement through the distribution of other instructional materials, product manuals, and technical materials with the knowledge and the specific intent to encourage and facilitate its customer’s infringing (either literally or under the doctrine of equivalents) use of the Next GEM platform. *See, e.g.*, Exs. 2, 7-9. 10X is liable for its induced infringement of the ’444 patent pursuant to 35 U.S.C. § 271 (b).

41. 10X has engaged in the above activities with knowledge of the ’444 patent and with the specific intent to encourage and cause infringement by its customers, as shown by the allegations set forth in ¶¶ 33-40 above.

42. 10X has contributed to, or has threatened to contribute to, the infringement by its customers of the ’444 patent by, without authority, selling and offering to sell within the United States materials and apparatuses for practicing the claimed invention of the ’444 patent, including at least the Next GEM platform as a whole and/or the individual components of the Next GEM platform (including without limitation reagent kits). When, for example, the Next GEM platform is used by 10X’s customers for the various applications 10X offers, the claimed method for detecting the product of an enzymatic reaction is performed, thereby infringing, literally or

under the doctrine of equivalents, at least claims 1-2, 4, and 8 of the '444 patent. The Next GEM platform and/or its individual components, supplied by 10X, constitute a material part of the claimed invention of the '444 patent.

43. On information and belief, 10X knows that the Next GEM platform and/or its individual components constitute a material part of the inventions of the '444 patent and that they are not a staple article or commodity of commerce suitable for substantial noninfringing use. As documented above and in Exhibit 5, the Next GEM platform consists of a specialized microfluidic device along with specialized reagents for conducting reactions in microfluidic droplets. *See supra* ¶ 25; Exs. 2, 7-9. As such, no part of the Next GEM platform is a staple article of commerce suitable for substantial non-infringing use. 10X knows that the Next GEM platform and its individual components are not staple articles or commodities of commerce suitable for substantial non-infringing use because the Next GEM platform and its individual components have no use apart from infringing the '444 patent. 10X is liable for its contributory infringement of the '444 patent pursuant to 35 U.S.C. § 271(c).

44. 10X's infringement of the '444 patent has injured Plaintiff in its business and property rights. 10X's infringement of the '444 patent has been and is deliberate and willful and constitutes egregious misconduct. Despite actual knowledge of the '444 patent and numerous related patents and applications since at least its trial against Bio-Rad in the District of Delaware in November 2018, 10X continued to develop and launch its infringing products. As set forth in Exhibit 5, when customers use 10X's Next GEM platform, they practice every element of multiple claims of the '444 patent. In developing and launching its product, 10X has been willfully blind to this ongoing infringement. Plaintiff is entitled to recover monetary damages for the injuries arising from 10X's willful infringement pursuant to 35 U.S.C. § 284 in an amount to be determined

at trial. 10X's infringement of the '444 patent has caused irreparable harm to Plaintiff and will continue to cause such harm unless and until 10X's infringing activities are enjoined by this Court.

COUNT II

(Infringement of U.S. Patent No. 9,919,277)

45. Plaintiffs re-allege and incorporate by reference the allegations contained in paragraphs 1 through 44 above as relevant to this count.

46. On March 20, 2018, the United States Patent and Trademark Office duly and legally issued the '277 patent, entitled "In vitro evolution in microfluidic systems." A copy of the '277 patent is attached as Exhibit 14.

47. Andrew David Griffiths, David A. Weitz, Darren R. Link, Keunho Ahn, and Jerome Bibette are the sole and true inventors of the '277 patent. By operation of law and as a result of written assignment agreements, United Kingdom Research and Innovation ("UKRI") and President and Fellows of Harvard College ("Harvard University") obtained the entire right, title and interest to and in the '277 patent.

48. Pursuant to license agreements Bio-Rad entered into with UKRI and Harvard University, Bio-Rad obtained an exclusive license to the '277 patent in the field of microfluidic systems, kits and chips.

49. On information and belief, 10X has infringed and continues to infringe at least claims 1-6, 8-9, 11, and 13-14 of the '277 patent pursuant to 35 U.S.C. § 271(a), literally or under the doctrine of equivalents, by using within the United States without authority the Next GEM products. As an example, attached as Exhibit 16 is a preliminary and exemplary claim chart detailing 10X's infringement of multiple claims of the '277 patent. This chart is not intended to limit Plaintiff's right to modify this chart or any other claim chart or allege that other activities of 10X infringe the identified claims or any other claims of the '277 patent or any other patents.

Exhibit 16 is hereby incorporated by reference in its entirety. Each claim element in Exhibit 16 that is mapped to 10X's Next GEM platform shall be considered an allegation within the meaning of the Federal Rules of Civil Procedure and therefore a response to each allegation is required.

50. 10X's infringement of the '277 patent has been knowing and willful. 10X's founders, senior-most executives, and senior scientists became aware of Bio-Rad's license with Harvard University at least in connection with 10X's November 2018 trial against Bio-Rad in the District of Delaware, where 10X was found to willfully infringe intellectual property from the University of Chicago. Moreover, 10X has become deeply familiar with the full scope of the Harvard University droplet patent portfolio (including the '277 patent), at least because it has licensed certain patents from Harvard University, as confirmed by Dr. Ben Hindson, 10X's co-founder and Chief Scientific Officer, during 10X's November 2018 trial. In fact, Dr. Hindson confirmed that 10X was well aware of the work of at least one named inventor of the '277 patent, including Dr. Weitz.

51. On information and belief, in view of 10X's (1) knowledge of Bio-Rad's license with Harvard University, (2) knowledge of the Harvard University droplet patents, and (3) prior willful infringement of intellectual property controlled by Bio-Rad, 10X has carefully monitored and analyzed the Harvard University droplet patent portfolio and, through that work, become aware of the '277 patent and the fact that the Next GEM platform infringes the '277 patent. Despite being aware of these facts, 10Xs has nonetheless launched its Next GEM platform, even making it the centerpiece of a \$362 million IPO. As 10X stated in its prospectus in support of its IPO, "[w]e currently expect that, by the end of the third quarter of 2019, all Chromium instruments that we sell will operate exclusively with our Next GEM solutions and that our

Chromium products utilizing our Next GEM microfluidic chips will constitute substantially all of our Chromium sales by the end of 2020.” Ex. 4 at 7.

52. In addition, 10X has had knowledge of and notice of the ’277 patent and its infringement since at least, and through, the filing and service of this Complaint and despite this knowledge continues to commit the aforementioned infringing acts. For at least the reasons stated in this paragraph and in paragraphs 47-49 above, this infringement has been willful.

53. 10X actively, knowingly, and intentionally has induced, or has threatened to induce, infringement of at least claims 1-6, 8-9, 11, and 13-14 of the ’277 patent through a range of activities. First, on information and belief, 10X has induced infringement by controlling the design and manufacture of, offering for sale, and selling the Next GEM platform and/or its individual components with the knowledge and specific intent that its customers will use the Next GEM platform to infringe the ’277 patent, literally or under the doctrine of equivalents, by performing the claimed method for conducting an enzymatic reaction.

54. Second, on information and belief, 10X has induced infringement by its customers through the dissemination of promotional and marketing materials relating to the Next GEM platform with the knowledge and specific intent that its customers will use the Next GEM platform to infringe the ’277 patent, literally or under the doctrine of equivalents, by performing the claimed method for conducting an enzymatic reaction. For instance, 10X promotes the Next GEM platform on its website. As 10X states on the Technology portion of its website, its “proprietary Next GEM technology fuels our Chromium System with an innovative reagent delivery system, set of algorithms and turnkey software analysis tools that enable the discovery of previously inaccessible genetic information at massive rate and scale.” Ex. 3 at 1.

55. Third, on information and belief, 10X has induced infringement by its customers through the creation of distribution channels for the Next GEM platform and/or its individual components in the United States with the knowledge and specific intent that its customers will use the Next GEM platform to infringe the '277 patent, literally or under the doctrine of equivalents, by performing the claimed method for conducting an enzymatic reaction.

56. Fourth, on information and belief, 10X has induced infringement through the distribution of other instructional materials, product manuals, and technical materials with the knowledge and the specific intent to encourage and facilitate its customer's infringing (either literally or under the doctrine of equivalents) use of the Next GEM platform. *See, e.g.*, Exs. 2, 7-9. 10X is liable for its induced infringement of the '277 patent pursuant to 35 U.S.C. § 271 (b).

57. 10X has engaged in the above activities with knowledge of the '444 patent and with the specific intent to encourage and cause infringement by its customers, as shown by the allegations set forth in ¶¶ 49-56 above.

58. 10X has contributed to, or has threatened to contribute to, the infringement by its customers of the '277 patent by, without authority, selling and offering to sell within the United States materials and apparatuses for practicing the claimed invention of the '277 patent, including at least the Next GEM platform as a whole and/or the individual components of the Next GEM platform (including without limitation reagent kits). When, for example, the Next GEM platform is used by 10X's customers for the various applications 10X offers, the claimed method for conducting an enzymatic reaction is performed, thereby infringing, literally or under the doctrine of equivalents, at least claims 1-6, 8-9, 11, and 13-14 of the '277 patent. The Next GEM platform and/or its individual components, supplied by 10X, constitute a material part of the claimed invention of the '277 patent.

59. On information and belief, 10X knows that the Next GEM platform and/or its individual components constitute a material part of the inventions of the '277 patent and that they are not a staple article or commodity of commerce suitable for substantial noninfringing use. As documented above and in Exhibit 16, the Next GEM platform consists of a specialized microfluidic device along with specialized reagents for conducting reactions in microfluidic droplets. *See supra* ¶ 25; Exs. 2, 7-9. As such, no part of the Next GEM platform is a staple article of commerce suitable for substantial non-infringing use. 10X knows that the Next GEM platform and its individual components are not staple articles or commodities of commerce suitable for substantial non-infringing use because the Next GEM platform and its individual components have no use apart from infringing the '277 patent. 10X is liable for its contributory infringement of the '277 patent pursuant to 35 U.S.C. § 271(c).

60. 10X's infringement of the '277 patent has injured Plaintiff in its business and property rights. 10X's infringement of the '277 patent has been and is deliberate and willful and constitutes egregious misconduct. Despite actual knowledge of the '277 patent and numerous related patents and applications since at least its trial against Bio-Rad in the District of Delaware in November 2018, 10X continued to develop and launch its infringing products. As set forth in Exhibit 16, when customers use 10X's Next GEM platform, they practice every element of multiple claims of the '277 patent. In developing and launching its product, 10X has been willfully blind to this ongoing infringement. Plaintiff is entitled to recover monetary damages for the injuries arising from 10X's willful infringement pursuant to 35 U.S.C. § 284 in an amount to be determined at trial. 10X's infringement of the '277 patent has caused irreparable harm to Plaintiff and will continue to cause such harm unless and until 10X's infringing activities are enjoined by this Court.

COUNT III

(Infringement of U.S. Patent No. 10,190,115)

61. Bio-Rad re-alleges and incorporates by reference the allegations contained in paragraphs 1 through 60 above as relevant to this count.

62. On January 29, 2019, the United States Patent and Trademark Office duly and legally issued the '115 patent, entitled "Methods and Compositions For Nucleic Acid Analysis." A copy of the '115 patent is attached as Exhibit 15.

63. Serge Saxonov is the sole and true inventor of the '115 patent. By operation of law and as a result of written assignment agreements, Bio-Rad obtained the entire right, title and interest to and in the '115 patent.

64. On information and belief, 10X has infringed and continues to infringe at least claims 1, 4-15, and 18-26 of the '115 patent pursuant to 35 U.S.C. § 271(a), literally or under the doctrine of equivalents, by using within the United States without authority the Next GEM products. As an example, attached as Exhibit 17 is a preliminary and exemplary claim chart detailing 10X's infringement of multiple claims of the '115 patent. This chart is not intended to limit Plaintiff's right to modify this chart or any other claim chart or allege that other activities of 10X infringe the identified claims or any other claims of the '115 patent or any other patents. Exhibit 17 is hereby incorporated by reference in its entirety. Each claim element in Exhibit 17 that is mapped to 10X's Next GEM platform shall be considered an allegation within the meaning of the Federal Rules of Civil Procedure and therefore a response to each allegation is required.

65. 10X's infringement of the '115 patent has been knowing and willful. 10X's founders, senior-most executives, and senior scientists were aware of the '115 patent at least since the founding of 10X. Serge Saxonov, a co-founder of 10X and former employee of Bio-Rad is the sole inventor on the '115 patent and worked on the invention encompassed by the '115 patent

while he was employed at Bio-Rad. Thus, Serge Saxonov and 10X are deeply familiar with the '115 patent.

66. Consistent with the foregoing, going back to at least December 4, 2015, 10X has filed Information Disclosure Statements with the United States Patent Office in which it has cited U.S. Patent Publication No. 2015/0376609 which is a published version of the application that resulted in the '115 patent. *See* Ex. 18.

67. Despite being aware of these facts, 10X has nonetheless launched its Next GEM platform, even making it the centerpiece of a \$362 million IPO. As 10X stated in its prospectus in support of its IPO, “[w]e currently expect that, by the end of the third quarter of 2019, all Chromium instruments that we sell will operate exclusively with our Next GEM solutions and that our Chromium products utilizing our Next GEM microfluidic chips will constitute substantially all of our Chromium sales by the end of 2020.” Ex. 4 at 7.

68. In addition, 10X has had knowledge of and notice of the '115 patent and its infringement since at least, and through, the filing and service of this Complaint and despite this knowledge continues to commit the aforementioned infringing acts. For at least the reasons stated in this paragraph and in paragraphs 65-66 above, this infringement has been willful.

69. 10X actively, knowingly, and intentionally has induced, or has threatened to induce, infringement of at least claims 1, 4-15, and 18-26 of the '115 patent through a range of activities. First, on information and belief, 10X has induced infringement by controlling the design and manufacture of, offering for sale, and selling the Next GEM platform and/or its individual components with the knowledge and specific intent that its customers will use the Next GEM platform to infringe the '115 patent, literally or under the doctrine of equivalents, by using the claimed composition and device.

70. Second, on information and belief, 10X has induced infringement by its customers through the dissemination of promotional and marketing materials relating to the Next GEM platform with the knowledge and specific intent that its customers will use the Next GEM platform to infringe the '115 patent, literally or under the doctrine of equivalents, by using the claimed composition and device. For instance, 10X promotes the Next GEM platform on its website. As 10X states on the Technology portion of its website, its “proprietary Next GEM technology fuels our Chromium System with an innovative reagent delivery system, set of algorithms and turnkey software analysis tools that enable the discovery of previously inaccessible genetic information at massive rate and scale.” Ex. 3 at 1.

71. Third, on information and belief, 10X has induced infringement by its customers through the creation of distribution channels for the Next GEM platform and/or its individual components in the United States with the knowledge and specific intent that its customers will use the Next GEM platform to infringe the '115 patent, literally or under the doctrine of equivalents, by using the claimed composition and device.

72. Fourth, on information and belief, 10X has induced infringement through the distribution of other instructional materials, product manuals, and technical materials with the knowledge and the specific intent to encourage and facilitate its customer's infringing (either literally or under the doctrine of equivalents) use of the Next GEM platform. *See, e.g.*, Exs. 2, 7-9. 10X is liable for its induced infringement of the '115 patent pursuant to 35 U.S.C. § 271 (b).

73. 10X has engaged in the above activities with knowledge of the '115 patent and with the specific intent to encourage and cause infringement by its customers, as shown by the allegations set forth in ¶¶ 64-72 above.

74. 10X has contributed to, or has threatened to contribute to, the infringement by its customers of the '115 patent by, without authority, selling and offering to sell within the United States materials and apparatuses for practicing the claimed invention of the '115 patent, including at least the Next GEM platform as a whole and/or the individual components of the Next GEM platform (including without limitation reagent kits). When, for example, the Next GEM platform is used by 10X's customers for the various applications 10X offers, the claimed composition and device is used, thereby infringing, literally or under the doctrine of equivalents, at least claims 1, 4-15, and 18-26 of the '115 patent. The Next GEM platform and/or its individual components, supplied by 10X, constitute a material part of the claimed invention of the '115 patent.

75. On information and belief, 10X knows that the Next GEM platform and/or its individual components constitute a material part of the inventions of the '115 patent and that they are not a staple article or commodity of commerce suitable for substantial noninfringing use. As documented above and in Exhibit 17, the Next GEM platform consists of a specialized microfluidic device along with specialized reagents for conducting reactions in microfluidic droplets. *See supra* ¶ 25; Exs. 2, 7-9. As such, no part of the Next GEM platform is a staple article of commerce suitable for substantial non-infringing use. 10X knows that the Next GEM platform and its individual components are not staple articles or commodities of commerce suitable for substantial non-infringing use because the Next GEM platform and its individual components have no use apart from infringing the '115 patent. 10X is liable for its contributory infringement of the '115 patent pursuant to 35 U.S.C. § 271(c).

76. 10X's infringement of the '115 patent has injured Plaintiff in its business and property rights. 10X's infringement of the '115 patent has been and is deliberate and willful and constitutes egregious misconduct. Despite actual knowledge of the '115 patent, 10X continued

to develop and launch its infringing products. As set forth in Exhibit 17, when customers use 10X's Next GEM platform, they practice every element of multiple claims of the '115 patent. In developing and launching its product, 10X has been willfully blind to this ongoing infringement. Plaintiff is entitled to recover monetary damages for the injuries arising from 10X's willful infringement pursuant to 35 U.S.C. § 284 in an amount to be determined at trial. 10X's infringement of the '115 patent has caused irreparable harm to Plaintiff and will continue to cause such harm unless and until 10X's infringing activities are enjoined by this Court.

PRAYER FOR RELIEF

WHEREFORE, Plaintiffs pray for relief as follows:

- A. Judgment that 10X has infringed one or more claims of the '444 and '277 patents;
- B. An order permanently enjoining 10X from further infringement of the '444 and '277 patents or in the alternative an on-going royalty;
- C. An award of damages pursuant to 35 U.S.C. § 284;
- D. A determination that 10X's infringement of the '444 and '277 patents has been and is willful, and an award of enhanced damages, up to and including trebling of the damages awarded to Bio-Rad;
- E. An award to Bio-Rad of its costs, pre- and post-judgment interest, and reasonable expenses to the fullest extent permitted by law;
- F. A declaration that this case is exceptional pursuant to 35 U.S.C. § 285, and an award of attorneys' fees and costs; and
- G. An award of such other and further relief as the Court may deem just and proper.

WHEREFORE, Bio-Rad by itself prays for relief as follows:

- A. Judgment that 10X has infringed one or more claims of the '115 patent;
- B. An order permanently enjoining 10X from further infringement of the '115 patent or in the alternative an on-going royalty;
- C. An award of damages pursuant to 35 U.S.C. § 284;
- D. A determination that 10X's infringement of the '115 patent has been and is willful, and an award of enhanced damages, up to and including trebling of the damages awarded to Bio-Rad;
- E. An award to Bio-Rad of its costs, pre- and post-judgment interest, and reasonable expenses to the fullest extent permitted by law;
- F. A declaration that this case is exceptional pursuant to 35 U.S.C. § 285, and an award of attorneys' fees and costs; and

An award of such other and further relief as the Court may deem just and proper.

DEMAND FOR JURY TRIAL

Pursuant to Federal Rule of Civil Procedure 38(b), Bio-Rad hereby demands a trial by jury on all issues so triable.

Dated: December 18, 2019

Respectfully submitted,

WEIL, GOTSHAL & MANGES LLP

/s/ Patrick J. O'Toole, Jr.

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